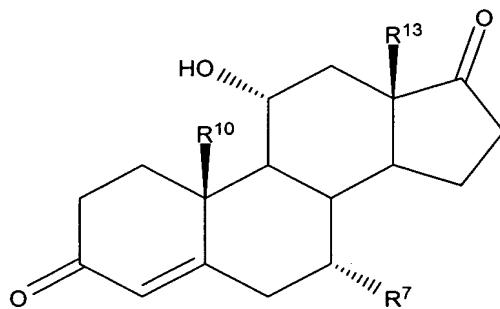


This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims: Please amend the claims as follows:

We claim:

Claim 1. (Currently Amended) Microbiological A microbiological process for
the production of a 7 α -substituted 11 α -hydroxy steroids with general of formula 4,B[::]



4,B

in which wherein

R⁷ is the grouping P-Q, whereby wherein

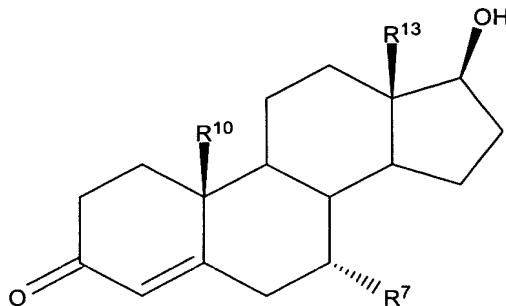
P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein

P-Q is bonded via P to the steroid skeleton,

R¹⁰ can be is either in α - or β -position and stands for is H, CH₃ or CF₃, and

R¹³ is methyl or ethyl,

comprising hydroxylating and oxidizing of in which a 7 α -substituted steroid of with general formula 3,A,

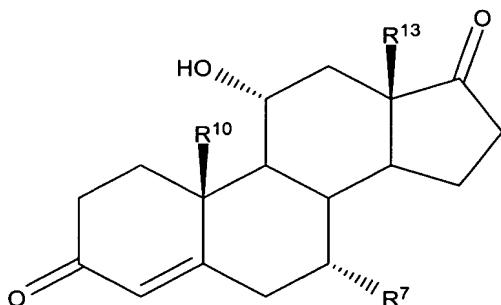


3,A

in which wherein R^7 , R^{10} and R^{13} have the same meanings are as indicated above, is hydroxylated and oxidized with use of a microorganism that which is selected from the group that comprises *Aspergillus* sp., *Beauveria* sp., *Glomerella* sp., *Gnomonia* sp., *Haplosporella* sp. and or *Rhizopus* sp.

Claim 2. (Currently Amended) Process A process according to claim 1, characterized in that wherein the microorganism is selected from the group that comprises *Aspergillus awamori*, *Aspergillus fischeri*, *Aspergillus malignus*, *Aspergillus niger*, *Beauveria bassiana*, *Glomerella cingulata*, *Gnomonia cingulata*, *Haplosporella hesperedica* and or *Rhizopus stolonifer*.

Claim 3. (Currently Amended) Microbiological A microbiological process for the production of 7 α -substituted 11 α -hydroxy steroids with general of formula 4,B[\therefore]



4,B

in which wherein

R^7 is the grouping P-Q, whereby wherein

P represents is a C₁- to C₄-alkylene and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein

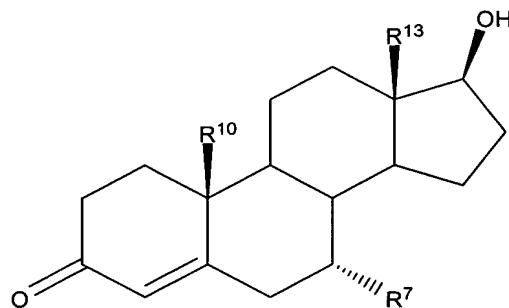
P-Q is bonded via P to the steroid skeleton,

R^{10} can be is either in α - or β -position and stands for is H, CH₃ or CF₃, and

R^{13} is methyl or ethyl,

in which

comprising hydroxylating of a 7 α -substituted steroid with general of formula 3,A in 11 α -position, [:]

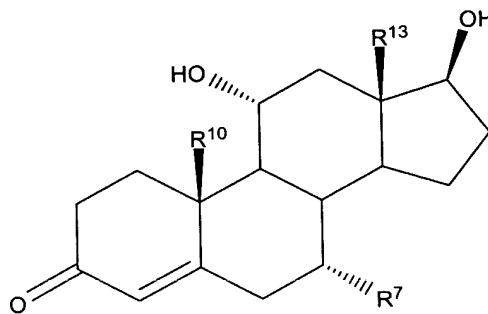


3,A

in which wherein R^7 , R^{10} and R^{13} have the same meanings are as previously indicated, is hydroxylated in 11 α -position in a first microbiological process step

with use of using a first microorganism that which is selected from the group that comprises *Aspergillus* sp., *Beauveria* sp., *Gibberella* sp., *Glomerella* sp., *Gnomonia* sp., *Metarrhizium* sp., *Nigrospora* sp., *Rhizopus* sp. and or *Verticillium* sp.,

with the formation of to form a 7 α -substituted 11 α -hydroxy steroid with general of formula C:



C

in which wherein R^7 , R^{10} and R^{13} have the same meanings are as indicated above, and

oxidizing the 7 α -substituted 11 α -hydroxy steroid with general product of formula C that is produced is then oxidized with use of a second microorganism that which is selected from the group that comprises *Bacillus* sp., *Mycobacterium* sp., *Nocardia* sp. and or *Pseudomonas* sp., with the formation of the 7 α -substituted steroid with general formula 4,B.

Claim 4. (Currently Amended)

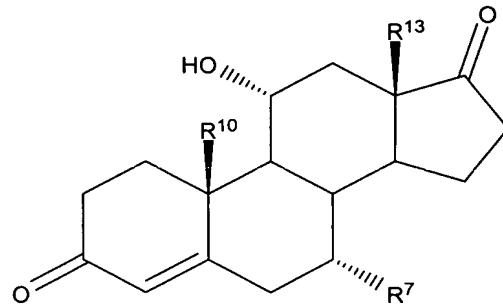
Process A process according to claim 3, wherein the group that comprises *Aspergillus malignus*, *Aspergillus ochraceus*, *Beauveria bassiana*, *Glomerella cingulata*, *Glomerella fusaroides*, *opliae*, *Nigrospora sphaerica*, *Rhizopus oryzae*, *ahliae*.

Claim 5. (Currently Amended)

Claim 5. (Currently Amended) Process A process according to claim 3, wherein the second microorganism is selected from the group that comprises *Bacillus lactimorbus*, *Bacillus sphaericus*, *Mycobacterium neoaurum*, *Mycobacterium smegmatis*, *Nocardia corallina*, *Nocardia globerula*, *Nocardia minima*, *Nocardia restrictus*, *Nocardia rubropertincta*, *Nocardia salmonicolor* and or *Pseudomonas testosteroni*.

Claim 6. (Currently Amended)

Microbiological A microbiological process for the production of a 7 α -substituted 11 α -hydroxy steroids with general of formula 4,B[.]



4,B

in which wherein

R⁷ is the grouping P-Q, whereby wherein

P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein

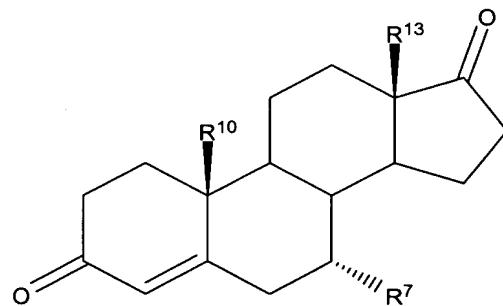
P-Q is bonded via P to the steroid skeleton,

R¹⁰ can be is either in α - or β -position and stands for is H, CH₃ or CF₃,

and

R¹³ is methyl or ethyl,

comprising hydroxylating in which 7 α -substituted steroids with general of formula D:



D

in which wherein R⁷, R¹⁰ and R¹³ have the same meanings are as indicated above, are hydroxylated with use of using a microorganism that which is selected from the group that comprises Aspergillus sp., Beauveria sp., Curvularia sp., Gibberella sp., Glomerella sp., Gnomonia sp., Haplosporella sp., Helicostylum sp., Nigrospora sp., Rhizopus sp. and or Syncephalastrum sp.

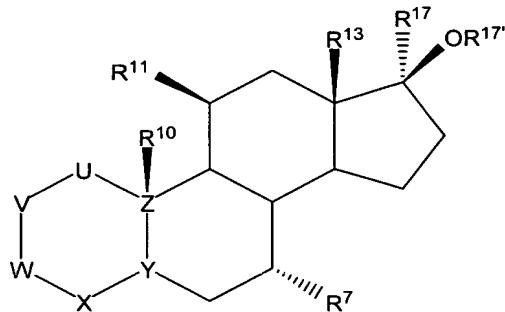
Claim 7. (Currently Amended) Process A process according to claim 6, wherein the microorganism is selected from the group that comprises Aspergillus alliaceus, Aspergillus awamori, Aspergillus fischeri, Aspergillus malignus, Aspergillus melleus, Aspergillus nidulans, Aspergillus niger, Aspergillus ochraceus, Aspergillus variecolor, Beauveria bassiana, Curvularia lunata, Gibberella zae, Glomerella cingulata, Glomerella fusaroides, Gnomonia cingulata, Haplosporella hesperedica, Helicostylum piriformae, Nigrospora sphaerica, Rhizopus oryzae and or Syncephalastrum racemosum.

Claim 8. (Currently Amended) Microbiological A microbiological process according to claim 1, wherein R⁷ stands for CH₃.

Claim 9. (Currently Amended) Microbiological A microbiological process according to claim 1, wherein R¹⁰ stands for H.

Claim 10. (Currently Amended) Microbiological A microbiological process according to claim 1, wherein R¹³ stands for CH₃.

Claim 11. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids with general of formulas 8, 10, and or 12:



8,10,12

in which wherein

~~U-V-W-X-Y-Z stands for one of is a~~ ring structures $C^1-C^2-C^3-C^4=C^5-C^{10}$, $C^1-C^2-C^3-C^4-C^5=C^{10}$ or $C^1-C^2-C^3-C^4-C^5-C^{10}$, whereby in this case, wherein an oxo group (=O) is bonded to W (=C³),

or a ring structure $C^1=C^2-C^3=C^4-C^5=C^6$, whereby in this case wherein a radical OR³ is bonded to W (=C³),

R³ stands for is H, C₁- to C₄-alkyl, C₁- to C₄-alkanoyl or a cyclic C₃- to C₇-ether with the O-atom of the OR³-radical,

R⁷ is the grouping P-Q, whereby wherein

P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein P-Q is bonded via P to the steroid skeleton,

R¹⁰ can be is either in α - or β -position and stands for is H, CH₃ or CF₃, and is present only if X-Y-Z is not $C^4-C^5=C^{10}$,

R¹¹ is a halogen,

R¹³ is methyl or ethyl,

R¹⁷ stands for is H, C₁- to C₁₈-alkyl, alicyclic C₁- to C₁₈-alkyl, C₁- to C₁₈-alkenyl, alicyclic C₁- to C₁₈-alkenyl, C₁- to C₁₈-alkinyl, C₁- to C₁₈-alkylaryl, C₁- to C₈-alkylenenitrile or for the grouping P-Q, whereby the grouping wherein P-Q has the above-mentioned meaning,

R^{17'} stands for is H, C₁- to C₁₈-alkyl, alicyclic C₁- to C₁₈-alkyl, C₁- to C₁₈-alkenyl,

alicyclic C₁- to C₁₈-alkenyl, C₁- to C₁₈-alkynyl or C₁- to C₁₈-alkylaryl, whereby wherein R¹⁷ also can be is optionally bonded via a keto group to the 17 β -oxy group, and whereby R¹⁷ also in addition can be or optionally substituted with one or more groups NR¹⁸R¹⁹ or one or more groups SO_xR²⁰, whereby wherein x = 0, 1 or 2, and R¹⁸, R¹⁹ and R²⁰ in each case, independently of one another, can have the same meaning as R¹⁷, as well as their pharmaceutically compatible addition salts, esters and amides a pharmaceutically compatible salt thereof or an ester or amide thereof.

Claim 12. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein U-V-W-X-Y-Z stands for is a ring structure C¹-C²-C³-C⁴=C⁵-C¹⁰ or C¹-C²-C³-C⁴-C⁵=C¹⁰ or C¹=C²-C³=C⁴-C⁵=C¹⁰.

Claim 13. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R¹ stands for is H.

Claim 14. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R⁷ stands for is CH₃.

Claim 15. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R¹¹ stands for is fluorine.

Claim 16. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R¹³ stands for is CH₃.

Claim 17. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R¹⁷ stands for is H, CH₃, C₁- to C₁₈-alkynyl, CH₂CN or CF₃.

Claim 18. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -

halogen steroids according to claim 11, wherein R^{17} is ethinyl.

Claim 19. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R^{17} stands for is H.

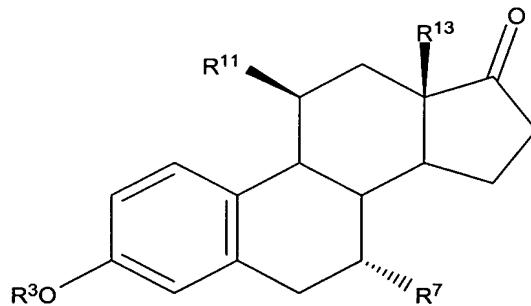
Claim 20. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, namely which is

17 α -Ethinyl-11 β -fluoro-17 β -hydroxy-7 α -methylestr-4-en-3-one,

17 α -Ethinyl-11 β -fluoro-17 β -hydroxy-7 α -methylestr-5(10)-en-3-one or

17 α -Ethinyl-11 β -fluoro-7 α -methylestra-1,3,5(10)-triene-3,17 β -diol.

Claim 21. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -haloestra-1,3,5(10)-trienes with general of formula 6:



6

in which wherein

R^3 stands for is H, C₁- to C₄-alkyl, C₁- to C₄-alkanoyl or a cyclic C₃- to C₇-ether with the O-atom of the OR³-radical,

R^7 is the grouping P-Q, whereby wherein

P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein P-Q is bonded via P to the steroid skeleton,

R^{11} is a halogen;

R^{13} is methyl or ethyl,
~~as well as their pharmaceutically compatible addition salts, esters and amides a pharmaceutically compatible salt thereof or an ester or amide thereof.~~

Claim 22. (Withdrawn, Currently Amended) ~~A 7 α ,17 α -Substituted substituted~~ haloestra-1,3,5(10)-trienes according to claim 21, namely which is

11 β -Fluoro-3-hydroxy-7 α -methylestra-1,3,5(10)-trien-17-one.

Claim 23. (Withdrawn, Currently Amended) ~~Process A process~~ for the production of a 7 α ,17 α -substituted 11 β -halogen steroids with general of formula 10 according to according to claim 11, in which U-V-W-X-Y-Z stands for is the ring structure $C^1-C^2-C^3-C^4=C^5-C^{10}$, with the following process comprising the steps of:

- Nucleophilic substitution in a 7 α -substituted 11 α -hydroxy steroid with general of formula 4,B in 11-position with a halodehydroxylating reagent;
- Reaction of the 7 α -substituted 11 β -halogen steroid that is produced in this case with an alkylating agent in a selective manner on the C^{17} atom of the ring skeleton to form the 7 α ,17 α -substituted 11 β -halogen steroid with general of formula 10.

Claim 24. (Withdrawn, Currently Amended) ~~Process A process~~ for the production a 7 α ,17 α -substituted 11 β -halogen steroids with general of formula 12 according to according to claim 11, in which U-V-W-X-Y-Z stands for is the ring structure $C^1-C^2-C^3-C^4-C^5=C^{10}$, with the following process comprising the steps of:

- Nucleophilic substitution in a 7 α -substituted 11 α -hydroxy steroid with general of formula 4,B in 11-position with a halodehydroxylating reagent,
- Reaction of the 7 α -substituted 11 β -halogen steroid that is produced in this case with an alkylating agent in a selective manner on the C^{17} atom of the ring skeleton to form the 7 α ,17 α -substituted 11 β -halogen steroid with general of formula 10,
- Isomerization of the 7 α ,17 α -substituted 11 β -halogen steroid with general of formula 10 to form the corresponding isomer with general of formula 12, in which U-V-W-X-Y-Z stands for is the ring structure $C^1-C^2-C^3-C^4-C^5=C^{10}$.

Claim 25. (Withdrawn, Currently Amended) Process A process for the production a 7 α ,17 α -substituted 11 β -halogen steroids with general of formula **8** according to according to claim 11, in which U-V-W-X-Y-Z stands for is the ring structure $C^1=C^2-C^3=C^4-C^5=C^6$ with the following process comprising the steps of:

- Nucleophilic substitution in a 7 α -substituted 11 α -hydroxy steroid with general of formula **4,B** in 11-position with a halodehydroxylating reagent,
- Oxidizing of the 7 α -substituted 11 β -halogen steroid that is produced in this case to form 7 α -substituted estra-1,3,5(10)-triene with general of formula **6** according to one of claims claim 17 and 18;
- Reaction of the 7 α -substituted estra-1,3,5(10)-triene with general formula **6** with an alkylating agent in a selective manner on the C^{17} atom of the ring skeleton to form the 7 α ,17 α -substituted 11 β -halogen steroid with general formula **8**.

Claim 26. (Cancelled)

Claim 27. (Withdrawn, Currently Amended) Pharmaceutical preparations that contain A pharmaceutical preparation containing at least one 7 α ,17 α -substituted 11 β -halogen steroid with general formulas **8, 10, and 12** according to claim 11 as well as at least one pharmaceutically compatible vehicle.